

fast facts

advancing safety, health, and workplace rights in the legislative branch

Methylene Chloride

The Silent Killer

Among the most serious health violations discovered by the Office of Compliance (OOC) during its recent biennial inspections is the use of chemical products that contain methylene chloride (CAS number 75-09-2). Also known as dichloromethane or methylene dichloride, it is a colorless, volatile liquid with an odor similar to ether or chloroform. It is known to cause cancer in humans and to affect the kidneys and the brain. Though OSHA does not prohibit its use, it has created comprehensive health standards specifically for this chemical. Employers must comply with various parts of standard 29 CFR 1910.1052 whenever methylene chloride is present.

In many instances, this toxic solvent has been in use without employee

knowledge of the potential adverse health effects. This unnecessarily increases employee exposure and their risk of developing health problems, including cancer. Consequently, the OOC issues a notice of “Serious Deficiency Needing Prompt Attention” to offices that are not compliant with OSHA’s specific standard for methylene chloride and fail to include it in their Hazard Communication Program.

Exposure to Methylene Chloride

Methylene chloride can be absorbed into the body directly through the skin, even penetrating many materials from which protective gloves are made. Although methylene chloride typically isn’t smelled



Figure 1: Cans of sealant containing methylene chloride found on a recent Office of Compliance inspection.

until its airborne concentration reaches 200 parts per million (ppm), OSHA’s full-shift exposure limit for it is 25 ppm. Coupled with its high rate of evaporation, the potential for simultaneous inhalation and skin absorption creates a high risk of exposure to dangerous doses.

Effects of Methylene Chloride

Short-term effects of overexposure include headaches, nausea, feelings of lightheadedness, sluggishness, and irritability. It can also irritate the nose, throat and lungs, causing coughing, wheezing and shortness of breath. High doses of methylene chloride can cause confusion, slurred speech, and loss of coordination. High doses can also cause the lungs to fill with fluid, and can even result in death. Long-term exposure can cause memory loss and emotional changes. Exposures may also worsen the symptoms



Figure 2: Bottles of methylene chloride found on a recent Office of Compliance inspection.

of heart disease, resulting in chest pains and angina. Mere contact with chemical products containing methylene chloride can irritate and burn the skin and eyes.

Methylene Chloride on Office of Compliance Inspections

In legislative branch areas, liquid products found to contain methylene chloride include certain paint and varnish removers, acrylic (Plexiglas) cement, fabric adhesives, and various products used in lithographic printing operations. These liquids may be potentially inhaled and absorbed through the skin. Aerosol products—which can easily create inhalation hazards—that have been found

to contain methylene chloride include spray paints, lubricants, several spray-on gasket and gasket remover products,

Methylene Chloride on Office of Compliance Inspections

The OOC has recommended to Congress in biennial reports dating back to 1998 that the use of products containing methylene chloride be suspended. The OOC has further recommended replacing these hazardous, life-threatening chemicals with safer, non-toxic substitutes. Regardless, OOC biennial inspections continue to discover this very toxic substance in legislative branch workplaces.



Figure 3: Cans of gasket stripper containing methylene chloride found on a recent Office of Compliance inspection.

fast stats

- **Methylene chloride can be absorbed through the skin. It rapidly penetrates most types of protective gloves.**
- **Toxic concentrations of methylene chloride can be inhaled, even when it cannot be smelled. Any solvent can be readily inhaled when it is dispensed from an aerosol product.**
- **Overexposure can cause serious health problems, including cancer.**
- **OSHA's Methylene Chloride Standard (29 CFR 1910.1052) requires a special written program to be created and implemented if it is present in the workplace.**
- **During the 109th Congress, methylene chloride use was found to be non-compliant in 17 locations. 14 "Notices of Serious Deficiency Needing Prompt Attention" were issued.**



Peter Ames Eveleth
General Counsel
Rachel Berg Scherer
Editor

If you spot a safety hazard in your legislative branch workplace, contact the Office of Compliance to report it:
Room LA 200, John Adams Building
110 Second Street, SE
Washington, DC 20540
t/ 202-724-9250; tdd/ 202-426-1912; f/ 202-426-1913
Recorded Information Line/ 202-724-9260
www.compliance.gov

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